

**Discussion of Long-Term Item Utilization for the
California Standards Tests and California High School Exit Examination
Educational Testing Service (ETS)**

Background

The California State Board of Education (SBE) and California Department of Education (CDE) wish to develop a long-term plan that will predict the amount of item development that will be required, over the next several years, to sustain the California Standards Tests (CSTs), California High School Exit Examination (CAHSEE), and other State Assessment Programs. This document outlines some suggestions that SBE and CDE may wish to consider in developing a long-term item utilization plan.

Phase One of Item Bank Development

Beginning with its contracts with ETS, the State's approach for both the CST and CAHSEE has been to require the development of a large number of items over a three-year period to create an item bank that can support the development of valid and reliable tests that meet the highest possible professional standards. Table 1A shows that, for the 2002 to 2004 period, ETS will have field tested 3506 ELA items for the CSTs and 3311 ELA items for CAHSEE, including:

For CSTs:

- In fall 2002, 950 ELA items (4 versions X 25 items for grades 3-10; 3 versions X 25 items for grades 2 and 11);
- In spring 2003, 1200 ELA items (20 versions X 6 items for grades 2-11); and
- In spring 2004, 1356 will be field tested (25 versions X 6 items for grades 6-11, 20 versions X 6 items for grades 3-5, and 16 versions X 6 items for grade 2).

For CAHSEE:

- In 2002, 696 ELA items
- In 2003, 1488 ELA items
- In 2004, 1127 ELA items

**Table 1A. Numbers of ELA Items Field Tested, CSTs and CAHSEE
2002 – 2004**

ELA Field Tested Items	2002		2003		2004	
Test	CSTs (Fall FT)	CAHSEE	CSTs	CAHSEE	CSTs	CAHSEE
Grade 2	75	-	120	-	96	-
Grade 3	100	-	120	-	120	-
Grade 4	100	-	120	-	120	-
Grade 5	100	-	120	-	120	-
Grade 6	100	-	120	-	150	-
Grade 7	100	-	120	-	150	-
Grade 8	100	-	120	-	150	-
Grade 9	100	-	120	-	150	-
Grade 10	100	696	120	1488	150	1127
Grade 11	75	-	120	-	150	-
Total FT items	950	696	1200	1488	1356	1127
Totals by Year	1646		2688		2483	
Totals by Program:						
CST 3506			CAHSEE 3311			

Similar numbers of items per grade have been field tested for CAHSEE and CST mathematics tests, as shown in Table 1B, and also for the history-social science and science CSTs, as shown in Tables 1C and 1D:

**Table 1B. Numbers of Mathematics Items Field Tested, CSTs and CAHSEE
2002 – 2004**

Mathematics Field Tested Items	2002		2003		2004	
Test	CSTs (Harcourt)	CAHSEE	CSTs	CAHSEE	CSTs	CAHSEE
Grade 2	35	-	120	-	108	-
Grade 3	35	-	120	-	120	-
Grade 4	35	-	120	-	120	-
Grade 5	35	-	120	-	120	-
Grade 6	35	-	120	-	150	-
Grade 7	35	-	120	-	150	-
Algebra I	35	-	120	-	150	-
Algebra II	35	-	120	-	180	-
Geometry	35		120		150	
Summative H.S. Mathematics	35	-	78	-	84	-
CAHSEE Mathematics	-	516	-	1500	-	1920
Total FT items	350	516	1158	1500	1332	1920
Totals by Year	866		2658		3252	
Totals by Program:						
CST 2840			CAHSEE 3936			

**Table 1C. Numbers of CST History-Social Science Items Field Tested
2002 – 2004**

Test	2002	2003	2004
	CSTs	CSTs	CSTs
Grade 6-8	35	120	180
Grade 10 World History	35	120	180
Grade 11 U.S. History	35	120	180
Total by Year	105	360	540
Total FT Items	1005		

**Table 1D. Numbers of CST Science Items Field Tested
2002 – 2004**

Test	2002	2003	2004
	CSTs	CSTs	CSTs
Grade 5	0	210	144
Biology	35	120	180
Chemistry	35	120	180
Physics	35	120	180
Earth Science	35	120	180
Total by Year	140	690	864
Total FT Items	1694		

Also, in 2002 and 2003, 600 items were approved by the CAPA item review committees, with 80 to be placed on mathematics and ELA operational forms in 2004 and 112 to be field tested in science in 2004.

Phase Two of Item Bank Development

Now that large numbers of items have been developed for the state programs, it is possible to determine the following key aspects of the next phase of item development and to ascertain how much future development is required to reach and sustain an equilibrium.

Determining the Optimal Size of the Bank. The first important consideration in developing a long-term development plan is determining the size of the item bank required to create high quality operational test forms over several years. With too small a bank, it is difficult to create forms that fulfill the blueprint and also meet appropriate psychometric requirements. Without a sufficiently large bank, it is not possible to build operational forms that assess various components of the standards, provide a variety in item types (e.g., with or without mathematical context), and contain items that do not clue each other. ETS also recognizes that there are unnecessary expenses associated with developing and maintaining too large a bank.

“Equilibrium” refers to the state of the item bank in which there are sufficient items to support the development of operational forms and new item development is needed only to offset items released to the public and items lost through attrition as described below.

Based on our experience with the construction of tests for both CAHSEE and the CSTs, ETS suggests that, with the exception of ELA, the content area item banks, at equilibrium, should contain 4 to 5 times the number of items annually required for building operational forms. For ELA, we suggest 5 to 6 times the number of items annually required for building operational forms. The larger ratio for ELA is based on the fact that most of the items are passage based. Therefore, releasing or retiring a passage results in a proportionally greater loss of items in the bank.

The following four factors impact the size of an item bank.

1. *Field Test Survival Rates.* The first factor is the percentage of new items that can be expected to survive after being field-tested. With one year of CST data and two years of CAHSEE data, ETS has observed that this percentage varies by content area and grade. The data are provided in approximate values in the following tables (Note that general mathematics, integrated mathematics, or integrated science CSTs are not included in Table 2 because no items are developed specifically for these tests. The General Mathematics CST includes only items developed and field-tested for grades 6 and 7. The integrated Mathematics and Sciences tests include only items developed and field-tested for the discipline-specific tests, such as Algebra I, Geometry, Chemistry, etc.):

**Table 2. Approximate Percentage of Usable Items from Field Testing
California Standards Tests – 2003 Administrations**

Subject Area	60-70%	70-80%	80-90%	90%+
Mathematics:	Summative H.S.	Math grade 6	Math grade 7 Algebra I Algebra II	Math grade 2 Math grade 3 Math grade 4 Math grade 5 Geometry
Sciences:	Physics	Biology Earth Science	Chemistry	Science grade 5
English Language Arts		ELA grade 3 ELA grade 6 ELA grade 11	ELA grade 4 ELA grade 9	ELA grade 2 ELA grade 5 ELA grade 7 ELA grade 8 ELA grade 10
History-Social Sciences			H-SS World	Grade 8 U.S. History

**Table 3. Approximate Percentage of Usable Items from Field Testing
CAHSEE - 2002 and 2003 Administrations**

70%	75%
Mathematics	English-Language Arts

2. *Released Items.* A second factor is the numbers of items expected to be released on an annual basis. Recognizing that the percentage and format of the release are policy decisions, ETS's calculations for the equilibrium of the item bank are based on discussions with SBE and CDE, as shown in Table 4:

Table 4. Annual Percentage and Numbers of Released Items

Year	CAHSEE		CST		CAPA		CELDT	
	%	# per test	%	# per test	%	# per test	%	# per test
1998			0	0				
1999			0	0				
2000			0	0				
2001	75	60	0	0			0	0
2002	75	60	0	0			0	0
2003	25	18-20	20	12-15	0	0	0	0
2004	25	18-20	20	12-15	0	0	0	0
2005	25	18-20	25	15-19	25	2	10	3-8
2006	25	18-20	25	15-19	25	2	10	3-8
2007	25	18-20	25	15-19	25	2	10	3-8
2008	25	18-20	25	15-19	25	2	10	3-8
2009	25	18-20	25	15-19	25	2	10	3-8
2010	25	18-20	25	15-19	25	2	10	3-8

ETS understands that the percentage of items to be released for CAHSEE is 25 percent annually. For the CSTs, 20 percent will be released in 2003 and 2004, with 25 percent released in subsequent years. Beginning in 2005, it is anticipated that 25 percent for CAPA will be released annually. For CELDT, ETS understands that the release may be as low as 10 percent, with the first release in 2005—subject to SBE and CDE negotiations with the CELDT contractor.

3. *Attrition.* The third factor is the natural attrition that occurs in any item bank. The attrition rate is higher for ELA (10 to 15 percent) than for other content areas (5 to 10 percent) because items are in groups associated with specific passages. Experience has shown that attrition is caused primarily by three factors:

- Items and/or passages become dated. A passage about student backpacks, while of high interest to students, could become dated, for example, if students turn to another concept for transporting school materials. References in science or mathematics items can also become obsolete over time, despite efforts to anticipate such problems.

- Items or passages become sensitive. For example, items about space shuttles had to be suspended after the recent shuttle tragedy. Sensitivities may occur and change over a period of years in ways that cannot be anticipated.
- Content Review Panel (CRP) perceptions of item acceptability change. In all state programs, there is a slight drift toward more or less rigor in how the standards are interpreted in terms of assessment. It is customary that some percentage of items becomes less acceptable as the state standards become incorporated into instructional materials and become widely used in classrooms.

4. *Item Reuse.* The fourth factor is the number of times an item is used. Historically, 50 percent of CST items have been refreshed each year, which means that half of all items may serve as equating or linking items. For CAHSEE, 70 to 75 percent of the items have been refreshed annually with a linking set of approximately 22 items.

As the 2004 CST forms were developed, ETS recommended refreshing 60 to 70% of the items on the 2003 tests. This recommendation was made to provide the SBE and CDE the greatest flexibility in developing a plan to release CST items. While 50% of the items had been refreshed in previous years, the additional refreshment was needed to allow for a releasable pool of items that would span all reporting clusters and be useable for detailing the various types of items used on the tests. The CDE concurred with the ETS' recommendation. While the 70% replacement model is consistent with the model used in other states, the refreshment rate will be returned to 50 percent as approved by SBE. The 2004 increased refreshment rate occurred with no change in the CST test development scope of work because all items were drawn from and returned to the existing CST item bank.

ETS recommends that items removed from operational forms remain unused in the item bank for approximately three years. This concept is consistent with industry practices for the security of test items, and it is especially important for CAHSEE, so that the test-taking cohort sees as few repeated items as possible.

With the 50 percent refreshment model, half of the items are used for two or sometimes three years in a row, but then they, too, should be allowed to rest for at least three years. The number of items ETS suggests for the item banks at equilibrium makes it possible to set aside a large majority of items for three-year periods. This design is reflected in Tables 5A-D and 6A-B. With this item bank model, half the items typically are used once every four years through the life of the test. Half the items are used twice every five years. The released items are taken from the pool after at least one use, although preference is given to former anchor items that have been used at least twice. As mentioned above, having a sizeable pool of items available for release does not mean that large numbers must or should be released. A large eligible pool is desirable because it gives flexibility in selection of items according to SBE specifications for the release.

With the 20-25 percent anchor set model, a smaller number of items is used two or three years in a row, and an even larger number can rest in the item bank for three or more years. The released item strategy remains the same; released items are taken from the pool after at least one operational use and preference is given to items that have been used more than once.

With either model, the number of times an item could be used is the same. In theory, any single item in the bank could be used indefinitely at three-year intervals. However, ETS would recommend that, overall, items be used no more than five or six times after being field-tested, with suitable intervals of resting in the item bank. For ELA, ETS recommends four or five times of use after field-testing because passages tend to be more memorable than individual items.

The ELA Item Banks at Equilibrium

Cumulative inventories summarizing project item bank growth are shown in Tables 5A, 5B, 5C, and 5D for the CSTs and in Tables 6A and 6B for CAHSEE ELA and mathematics. For each year from 1999 to 2011, the tables provide actual or predicted entries for the following variables:

- Items field-tested during that year;
- Usable items from field-testing added to the item bank (assuming survival rates of 80 percent for the ELA CSTs and 75 percent for the CAHSEE ELA);
- Items needed for operational forms during that year;
- Items released during that year;
- Items removed by attrition during the year (e.g., dated/sensitive items or due to changes in CRP approach); and
- The cumulative inventory of items after additions to and removals from the item bank.

As mentioned earlier, ETS recommends building all item banks with the goal of reaching an equilibrium number of 4 to 5 times the number of items annually required for building operational forms (5 to 6 times for ELA because of the passage-based items).

As shown in Table 5A, for the ELA CSTs, 730 operational items are required per year (130 for grades 2 and 3; 600 for grades 4 through 11). Taking this number times 6 yields 4380 items as the ideal number for the ELA bank. The desirable number of items at equilibrium would actually be about 4500 items, because the CSTs are divided into grades and should have sufficient numbers of passage-based items per grade.

Because of the current California budget crisis, ETS recommends that, beginning immediately, the growth of the ELA CST item bank be slowed, as shown in Table 5A. This slower growth would result in fewer items being developed and field tested in 2005 and 2006 than is called for in the current CST Scope of Work. As Table 5A shows, under the new plan the CST ELA item bank would then reach equilibrium in 2009.

Table 5A. Cumulative Item Inventory for the English Language Arts CSTs

Year	Items Field Tested	Usable Items Added to Bank (80% of FT)	Items on Operatio nal Forms	Items Released	Items Removed by Attrition	Cumulati ve Inventory
1999*	615	461	350	0	0	461
2000*	684	547	350	0	46	962
2001*	350	280	350	0	55	1187
2002*	950	760	350	0	28	1919
2003	1200	960	730	146	228	2505
2004	1356	1085	730	146	96	3348
2005	678	542	730	183	109	3598
2006	678	542	730	183	81	3876
2007	550	440	730	183	81	4052
2008	550	440	730	183	66	4243
2009	430	344	730	183	66	4338
2010	430	344	730	183	52	4447
2011	430	344	730	183	52	4556

* Includes estimated field-testing by previous vendor

Note: The increase in field-tested items in 2003 and 2004 is attributable to CSTs becoming stand-alone tests in 2003.

ETS makes similar recommendations for slowing the growth of the item bank in each of the other CST content areas, with the result that in all content areas fewer items would be field-tested than called for in the current CST Scope of Work. For mathematics, Table 5B shows that with the field-testing of 360 items in 2005, and 234 items in each of the subsequent years, the mathematics CST item bank will reach equilibrium in 2005 at between 3250 and 3300 items.

Table 5B. Cumulative Item Inventory for the Mathematics CSTs
(Includes grades 2-7, Algebra I & II, Geometry, and Summative HS Mathematics)

Year	Items Field Tested	Usable Items Added to Bank (80% of FT)	Items on Operational Forms	Items Released	Items Removed by Attrition	Cumulative Inventory
1999*	670	536	350	0	0	536
2000*	635	508	350	0	27	1017
2001*	350	280	350	0	25	1272
2002*	350	280	350	0	14	1538
2003	1158	926	650	130	14	2320
2004	1332	1066	650	130	46	3210
2005	360	288	650	163	53	3282
2006	234	187	650	163	29	3277
2007	234	187	650	163	19	3282
2008	234	187	650	163	19	3287
2009	234	187	650	163	19	3292
2010	234	187	650	163	19	3297
2011	234	187	650	163	19	3302

* Includes estimated field-testing by previous vendor

Note: The increase in field-tested items in 2003 and 2004 is attributable to CSTs becoming stand-alone tests in 2003.

Table 5C shows that the history-social science item bank will reach equilibrium in 2004 and will require only minimal amounts of field testing in subsequent years.

Table 5C. Cumulative Item Inventory for the History-Social Science CSTs

Year	Items Field Tested	Usable Items Added to Bank (80% of FT)	Items on Operational Forms	Items Released	Items Removed by Attrition	Cumulative Inventory
1999	0	0	0	0	0	0
2000*	360	288	0	0	0	288
2001*	180	144	180	0	14	418
2002*	180	144	180	0	43	519
2003	360	288	195	39	7	761
2004	540	432	195	39	14	1140
2005	90	72	195	49	22	1141
2006	66	53	195	49	7	1138
2007	66	53	195	49	5	1137
2008	66	53	195	49	5	1136
2009	66	53	195	49	5	1135
2010	66	53	195	49	5	1134
2011	66	53	195	49	5	1133

Includes estimated field-testing by previous vendor

Note: additional item development was required in 2003-2004 because of test being moved from grade 9 to grade 8.

As shown in Table 5D, the science CSTs will take a few more years to reach equilibrium than either mathematics or history-social science. Table 5D assumes that two new tests are introduced operationally in 2006 and that the subject-specific tests remain as part of the CST battery. Equilibrium in science will most likely occur in 2008, with only minimal field-testing required thereafter.

Table 5D. Cumulative Item Inventory for the Science CSTs

Year	Items Field Tested	Usable Items Added to Bank (70% of FT)	Items on Operational Forms	Items Released	Items Removed by Attrition	Cumulative Inventory
1999	0	0	0	0	0	0
2000*	240	168	0	0	0	168
2001*	240	168	240	0	8	328
2002*	240	168	240	0	8	488
2003	690	483	240	48	8	915
2004	864	605	300	60	24	1436
2005	420	294	300	75	30	1625
2006	420	294	420	105	29	1785
2007	420	294	420	105	29	1945
2008	420	294	420	105	29	2105
2009	198	139	420	105	29	2110
2010	198	139	420	105	14	2130
2011	198	139	420	105	14	2150

* Includes estimated field-testing by previous vendor

** Assumes that subject-specific science tests remain in the battery and that one operational form for middle school science and one for high school science are also operational this year.

Note: additional item development in 2003-2004 is due to additional of Grade 5 Science test.

For CAHSEE, the growth of the ELA and mathematics item bank does not need to be slowed, as item development for this contract is almost complete. The existing contract requires field-testing of 5880 multiple-choice ELA items and 5880 multiple-choice mathematics items. ETS has developed all of these items, and almost all of them have been approved. Only a few hundred items remain to be reviewed by CAHSEE committees in February 2004. However, not all of the 5880 items have been

field-tested because the number of CAHSEE administrations was reduced from six to three in 2003 and from six to five in 2004. Additionally, for ELA the number of field test slots on each ELA form has been reduced from 12 to 7. Tables 6A and 6B show that the remaining items could be field-tested at a steady rate between 2005 and 2011, should the state desire.

Table 6A. Cumulative Item Inventory for CAHSEE ELA

Year	Items Field Tested	Usable Items Added to Bank (75% of FT)	Items on Operational Forms	Items Released	Items Removed by Attrition	Cumulative Inventory
1999	0	0	0	0	0	0
2000*	500	375	0	0	0	375
2001*	500	375	168	60	38	652
2002	696	522	504	60	38	1076
2003	1488	1116	252	18**	157	2017
2004	1127	845	438	18	112	2732
2005	371	278	438	18	85	2907
2006	371	278	438	18	42	3125
2007	371	278	438	18	42	3343
2008	371	278	438	18	42	3561
2009	371	278	438	18	42	3779
2010	371	297	438	18	42	4016
2011	371	297	438	18	45	4250

* Includes estimated field-testing by previous vendor

** Note that 18 equals 25% of one CAHSEE ELA operational form
with 73 items.

Table 6B. Cumulative Item Inventory for CAHSEE Mathematics

Year	Items Field Tested	Usable Items Added to Bank (70% of FT)	Items on Operational Forms	Items Released	Items Removed by Attrition	Cumulative Inventory
1999	0	0	0	0	0	0
2000*	500	350	0	0	0	350
2001*	500	350	80	60	18	622
2002	516	361	480	60	18	905
2003	1500	1050	320	20	18	1917
2004	1920	1344	480	20	53	3188
2005	276	193	480	20	67	3294
2006	276	193	480	20	19	3448
2007	276	193	480	20	19	3602
2008	276	193	480	20	19	3756
2009	276	193	480	20	19	3910
2010	276	193	480	20	19	4064
2011	276	193	480	20	19	4218

* Includes estimated field-testing by previous vendor
 Note: The items in the secure disclosed form districts may use to retest students in the graduating classes of 2004 and 2005 are not included in the Items Released columns in Tables 6A and 6B.

Additionally, the CAHSEE contract requires that ETS build, for each content area, 24 forms over the life of the contract, 16 for “regular” administrations and eight for emergency use. These numbers represent a requirement of six operational and six emergency forms each year. Because there are now only five annual CAHSEE administrations, and because it is now clear that emergency forms will not often be used, the number of operational forms built for each content area could be reduced to six annually—five operational forms and one emergency form. As of October 2003, ETS has built eleven operational forms and one emergency form for each content area. For ELA, the lower number of forms would mean that the number of CAHSEE ELA operational items required annually would be 438, not the 730 now specified in the contract. This change would permit the CAHSEE ELA item bank to reach optimal size—six times the annual number of operational items—in 2004. Additional field-testing of the already developed items in 2005 through 2011 would increase the number of items in the ELA bank without significant additional expense to the state.

For CAHSEE mathematics, the number of operational items required annually would be 480, permitting the mathematics item bank to reach optimal size—five times the annual number of operational items—in 2004. Field-testing of the items ETS has already developed would increase the number of items in the mathematics bank with little additional expense. Table 6B shows this proposed field-testing of already developed items extending between 2005 and 2011.

Table 7 gives an overview of the item bank equilibrium for both CAHSEE and CSTs in all content areas. This table shows the expected numbers of items field-tested and surviving field-

testing, the expected numbers of items released and removed due to attrition, and the items remaining in the bank by 2011.

Table 7. Summary of CAHSEE and CST Item Banks from 1999 to 2011

Totals	CAHSEE		California Standards Tests			
	ELA	Math	ELA	Math	Hist/SS	Science
Total Items Field Tested	6908	6868	8901	6259	2106	4548
Total FT Items Surviving	5217	4806	7089	5006	1686	3185
Total Release of Items	282	300	1573	1401	421	813
Total Expected Attrition	685	288	960	303	132	222
Items Remaining in Bank	4250	4218	4556	3302	1133	2150

The following diagram summarizes the inputs and outputs that create equilibrium in an item bank. The numbers of items in the chart show typical changes during a given year.

Item Bank Equilibrium

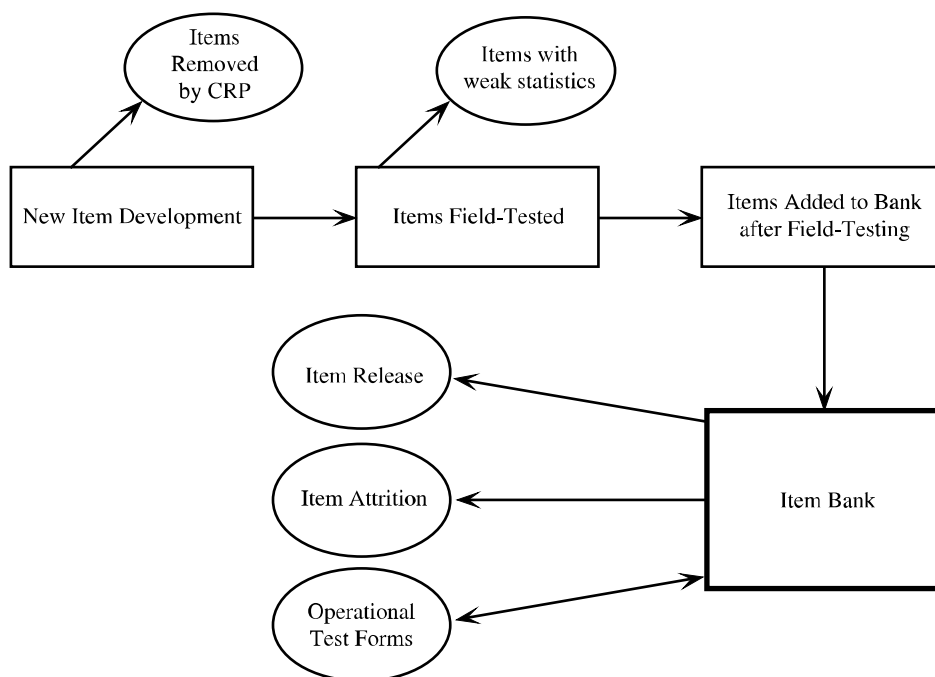


Table 8 shows the number of items that should be developed each year to produce and maintain item bank equilibrium for the CSTs in all content areas. The data are based on the assumption

that 80 percent of items taken by ETS to CRP review will be accepted for field-testing. ETS has had a 90 percent acceptance rate, on average, in English-language arts, mathematics, and history-social science and a 75 percent acceptance rate in science. The 80 percent figure has been used in this document because it represents an excellent acceptance rate according to general industry standards. Note that the bottom row giving the totals in Table 8 does not calculate to the 80 percent ratio because the numbers of items taken to the CRPs in 1999 and 2000 are unknown.

Table 8. California Standards Test Item Development from 1999 to 2011

Year	English Language Arts		Mathematics		History / Social Science		Science	
	Reviewed by CRP (80% acceptance rate)	Field Tested	Reviewed by CRP (80% acceptance rate)	Field Tested	Reviewed by CRP (80% acceptance rate)	Field Tested	Reviewed by CRP (70% acceptance rate)	Field Tested
1999	HEM (unknown)	615	HEM (unknown)	670	HEM (unknown)	0	HEM (unknown)	0
2000	HEM (unknown)	684	HEM (unknown)	635	HEM (unknown)	360	HEM (unknown)	240
2001	438	350	438	350	225	180	343	240
2002	1188	950	438	350	225	180	343	240
2003	1500	1200	1448	1158	450	360	986	690
2004	1695	1356	1665	1332	675	540	1234	864
2005	848	678	450	360	113	90	600	420
2006	848	678	293	234	83	66	600	420
2007	688	550	293	234	83	66	600	420
2008	688	550	293	234	83	66	600	420
2009	538	430	293	234	83	66	283	198
2010	538	430	293	234	83	66	283	198
2011	538	430	293	234	83	66	283	198
Total	9507	8901	6197	6259	2186	2106	6155	4548

Item Release

The following paragraphs summarize ETS's understanding of the plan to be presented to SBE for the release of items, based on the item-utilization concepts in this document.

Audiences for the Release

It is ETS's understanding that there are two main audiences to be served by the release of test items. The first is the general public, including parents, community members and the press, who wish to have a better sense of what the tests measure and also want to be assured that the tests are fair to students. The second audience is educators and upper-grade students, who wish to understand how the California Content Standards are measured on state assessments so that standards-based instruction can be improved.

A Plan for the General Public

For the general public, including parents, community members and the press, ETS understands that SBE and CDE may want to see one item from each grade and content area (at least for ELA and mathematics) treated as an "exemplar" item. Each exemplar item would be presented in a context that clarifies the relationship between assessment, standards, and instruction. The context might include, for example, explanations of how the selected item tests the standard, which components of the standard would be tested by other items, how the underlying concept or skills in the standard are expressed at other grade levels, and how the distractors function within the item.

If SBE approves, ETS will ask the CRP members in their first 2004 item review meetings (to be held between January and March) to approve a prototype exemplar treatment and to select items to be given exemplar treatment. The CRP would choose exemplar items from the sets of items that they approved for release in 2003. ETS will rely on the SBE and CDE providing the CRP with criteria for selection of the exemplars. Once the exemplars are written, ETS will give them to CRP members for review and approval. This plan would allow for development of the exemplars, approval by the CRPs, and publication of the exemplars prior to the next major score release and press event in the state, the CAHSEE data from the March administration.

A Plan for Educators

For educators, ETS understands that SBE and CDE would like to release items in a similar manner to the 2002 CAHSEE release. That is, mathematics, science, and history-social science items would be grouped according to strand or reporting cluster. ELA items would be grouped by passage. Each group would be preceded by a page or half-page of text describing the content of the strand. The language in the introductory text would be taken from the standards and frameworks. Each group of items would be followed by a table giving the answer keys and the standards measured by the items. It is our understanding that statewide p-values (percentage correct) would not be provided in this release. ETS would be pleased to prepare items in this format or in any other SBE-approved format.

Numbers of Items to Be Released

Table 4 in this document shows ETS's understanding of the percentages and numbers of released items for the CSTs and CAHSEE for 2003, as requested by the SBE and CDE. Under this plan, a full operational form of each CST could be released after five years. ETS understands that the issue of whether or not the full released form would exactly replicate the blueprint is an open

issue. Similarly, whether or not the full released form would replicate the statistical parameters of an actual test is also an open question. Whether or not, over time, items should be presented in relation to the California performance levels (e.g., proficient, advanced) is also to be determined. Finally, ETS understands that SBE may wish to release items according to the depth of coverage in the item bank. Resolution of these questions will be important as the sets of items for 2004 release are selected. Another open question is the treatment of the few standards that are “rotated” annually or biannually.

Selection of Items for 2003 Release

For the CST released items, ETS selected, in January 2003, a draft set of items for potential release. Each set contained approximately 20 percent of an operational form.

The criteria for the initial selection included the following:

- At least one item was included from every reporting cluster;
- Items represented a range of standards on the operational form;
- Items represented a range of difficulties; and
- Items represented a range of performance levels (e.g., basic, proficient).

ETS presented these items to each CRP at the initial 2003 meeting. At this meeting, the CRP members saw the draft sets as well as the other items eligible for release, and they made changes in the sets as desired. ETS presented the revised sets at the next CRP meeting, where panel members again had the opportunity to make changes. This process was repeated twice more, so that the CRP members saw the released item sets at each of four meetings held between January and July.

Selection of Items for 2004 Release

We have described the specifications and process used for selection of the 2003 items as context for the SBE to determine what process should be used for 2004 and subsequent years. ETS will be pleased to follow the wishes of the SBE for both the specifications and process to be used.